

## ABSTRACT

The present invention relates to a ternary metal colloid comprising metal nanoparticles which is composed of three different metal elements and 5 has a three layer core/shell structure, and to a process for producing the ternary metal colloid. The metal colloid according to the present invention can be produced by mixing a metal colloid comprising metal nanoparticles which is composed of two metal elements and has a core/shell structure with a metal colloid comprising metal nanoparticles which is composed of a metal 10 element different from the two metal elements. A catalyst produced from the metal colloid produced with this process has an extremely high catalytic activity.